

REMARKS

Claims 1-10, 15, 20-22 and 58-80 are pending. The claims have been amended to reference the amino acid sequence of the parent pullulanases rather than the DNA sequence.

It is respectfully submitted that the present amendment presents no new issues or new matter and places this case in condition for allowance. Reconsideration of the application in view of the above amendments and the following remarks is requested.

I. The Rejection of Claims 1, 2, 3, 20 and 21 under 35 U.S.C. 112

Claims 1, 2, 3, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claim 1 and its dependent claims are rejected as indefinite for the reasons asserted in the prior Office action.

Claim 1 and its dependent claims have been amended to reference the amino acid sequences of the parent pullulanases rather than the DNA sequences.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

II. The Rejection of Claims 4-10, 15, 22 and 58-70 under 35 U.S.C. 112

Claims 4-10, 15, 22 and 58-70 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The Examiner states that "Applicants are reminded that the recited SEQ ID Numbers in the above claims are DNA (nucleic acid) sequences, not amino acid sequences, rendering the claims indefinite."

Claim 1 and its dependent claims have been amended to reference the amino acid sequences of the parent pullulanases rather than the DNA sequences.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

III. The Rejection of Claims 1-3, 20 and 21 under 35 U.S.C. 112

Claims 1-3, 20 and 21 are rejected under 35 U.S.C. 112, as lacking enablement. The Examiner states:

Applicants are reminded that claimed SEQ ID Numbers are DNA (nucleic acid) sequences. The claimed invention appears to be drawn to modifying the three dimensional structure of a protein which is comprised of amino acid sequences to produce a protein of altered activity, and reflecting this modified amino acid sequence into a nucleic acid sequence. The Nucleic acid sequence is expressed in a host cell to

produce the modified protein with modified activities. However, the claims are drawn to modifying the three-dimensional structure of DNA sequences. DNA sequences do not have three dimensional structures.

Claim 1 and its dependent claims have been amended to reference the amino acid sequences of the parent pullulanases rather than the DNA sequences.

For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

IV. The Rejection of Claims 4-10, 15, 22 and 58-70 under 35 U.S.C. 112

Claims 4-10, 15, 22 and 58-70 are rejected under 35 U.S.C. 112, first paragraph as lacking enablement for the reasons discussed in paragraph III.

Claim 1 and its dependent claims have been amended to reference the amino acid sequences of the parent pullulanases rather than the DNA sequences.


For the foregoing reasons, Applicants submit that the claims overcome this rejection under 35 U.S.C. 112. Applicants respectfully request reconsideration and withdrawal of the rejection.

V. Conclusion

In view of the above, it is respectfully submitted that all claims are in condition for allowance. Early action to that end is respectfully requested. The Examiner is hereby invited to contact the undersigned by telephone if there are any questions concerning this amendment or application.

Respectfully submitted,

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